

Fundamentals of Advanced Biology

Biology · Answer Key · 12 Questions

1. What is the primary function of DNA?

A) Storing genetic information

- B) Producing energy
- C) Transporting molecules
- D) Breaking down waste

2. Which organelle is responsible for photosynthesis in plant cells?

A) Chloroplast

- B) Mitochondrion
- C) Nucleus
- D) Ribosome

3. What is the process by which organisms change over time through natural selection?

A) Evolution

- B) Mitosis
- C) Respiration
- D) Digestion

4. What are the basic building blocks of proteins?

A) Amino acids

- B) Nucleotides
- C) Fatty acids
- D) Sugars

5. Which type of cell lacks a nucleus and membrane-bound organelles?

A) Prokaryotic cell

- B) Eukaryotic cell
- C) Plant cell
- D) Animal cell

6. What gas do plants absorb from the atmosphere for photosynthesis?

A) Carbon dioxide

- B) Oxygen
- C) Nitrogen
- D) Hydrogen

7. What is the powerhouse of the cell, responsible for generating ATP?

- A) Mitochondrion**
- B) Golgi apparatus
- C) Endoplasmic reticulum
- D) Lysosome

8. The study of the interactions between living organisms and their environment is called:

- A) Ecology**
- B) Genetics
- C) Physiology
- D) Biochemistry

9. What are the segments of DNA that carry the genetic code for specific traits?

- A) Genes**
- B) Chromosomes
- C) Alleles
- D) Proteins

10. Which molecule is responsible for carrying genetic information from the nucleus to the ribosomes for protein synthesis?

- A) Messenger RNA (mRNA)**
- B) Transfer RNA (tRNA)
- C) Ribosomal RNA (rRNA)
- D) DNA

11. What is the process by which cells divide to produce two identical daughter cells?

- A) Mitosis**
- B) Meiosis
- C) Binary fission
- D) Budding

12. What is the primary pigment in plants that absorbs sunlight for photosynthesis?

- A) Chlorophyll**
- B) Carotenoid
- C) Anthocyanin
- D) Melanin